

単位 $\mu$ M	肺がん						胃がん											
	全体			男			女			全体			男			女		
	年齢 例数	62.1	$\pm$ 7.5	61.8	$\pm$ 6.6	62.4	$\pm$ 8.5	67.2	$\pm$ 11.1	67.6	$\pm$ 11.2	66.8	$\pm$ 11.2	50	$\pm$ 25	25	$\pm$ 25	
cis-Aconitate		2.8	$\pm$ 1.1	2.7	$\pm$ 1.2	3.0	$\pm$ 1.1	3.0	$\pm$ 1.4	3.2	$\pm$ 1.9	2.9	$\pm$ 0.75					
N-Acetylaspartate		8.3	$\pm$ 31.1	15.0	$\pm$ 42.4	1.1	$\pm$ 0.39	8.5	$\pm$ 30.4	0.98	$\pm$ 0.57	15.9	$\pm$ 42.1					
Gluconate		5.9	$\pm$ 6.5	6.9	$\pm$ 8.8	4.8	$\pm$ 1.5	6.6	$\pm$ 9.6	8.6	$\pm$ 13.2	4.5	$\pm$ 1.4					
Lactate		2388.4	$\pm$ 807.0	2501.0	$\pm$ 701.5	2266.4	$\pm$ 907.0	2383.3	$\pm$ 889.4	2509.9	$\pm$ 905.1	2256.6	$\pm$ 873.2					
Malate		6.4	$\pm$ 2.6	6.1	$\pm$ 2.6	6.8	$\pm$ 2.5	7.1	$\pm$ 3.6	6.7	$\pm$ 3.8	7.5	$\pm$ 3.3					
2-Oxoglutarate		11.4	$\pm$ 9.7	13.0	$\pm$ 11.1	9.6	$\pm$ 7.7	9.8	$\pm$ 7.7	9.5	$\pm$ 4.4	10.1	$\pm$ 10.1					
Pyruvate		59.3	$\pm$ 39.4	70.3	$\pm$ 43.3	47.5	$\pm$ 31.6	56.9	$\pm$ 35.4	60.8	$\pm$ 39.3	53.0	$\pm$ 31.3					
Citrate		42.6	$\pm$ 17.1	40.7	$\pm$ 19.2	44.6	$\pm$ 14.7	50.8	$\pm$ 21.1	50.1	$\pm$ 23.5	51.5	$\pm$ 18.8					
Isocitrate		0.86	$\pm$ 0.77	0.86	$\pm$ 0.98	0.87	$\pm$ 0.45	0.98	$\pm$ 0.72	1.1	$\pm$ 0.93	0.90	$\pm$ 0.42					
Ala		427.7	$\pm$ 106.3	422.3	$\pm$ 98.9	433.6	$\pm$ 115.7	429.9	$\pm$ 124.5	438.5	$\pm$ 113.3	421.2	$\pm$ 136.6					
Asn		50.7	$\pm$ 12.6	47.9	$\pm$ 11.5	53.7	$\pm$ 13.2	50.9	$\pm$ 12.6	52.0	$\pm$ 10.1	49.8	$\pm$ 14.8					
N-Acetyl-D-glucosamine+N-Acetyl-D-mannosamine		2.5	$\pm$ 1.6	2.7	$\pm$ 1.8	2.3	$\pm$ 1.4	2.0	$\pm$ 1.2	2.2	$\pm$ 1.2	1.8	$\pm$ 1.1					
2-Aminobutyrate		14.8	$\pm$ 5.2	14.8	$\pm$ 5.2	14.8	$\pm$ 5.4	14.6	$\pm$ 6.8	14.6	$\pm$ 6.0	14.6	$\pm$ 7.6					
Acetyl carnitine		7.1	$\pm$ 3.7	7.9	$\pm$ 4.2	6.2	$\pm$ 2.8	7.6	$\pm$ 4.0	7.7	$\pm$ 4.0	7.6	$\pm$ 4.1					
Creatine		38.5	$\pm$ 23.1	31.3	$\pm$ 21.0	46.3	$\pm$ 23.2	41.7	$\pm$ 27.7	31.9	$\pm$ 24.5	51.6	$\pm$ 27.6					
Citrulline		32.7	$\pm$ 13.3	34.0	$\pm$ 15.9	31.3	$\pm$ 10.0	35.6	$\pm$ 17.8	37.9	$\pm$ 20.4	33.4	$\pm$ 14.9					
Cystine		45.9	$\pm$ 12.7	48.6	$\pm$ 12.4	42.9	$\pm$ 12.5	41.9	$\pm$ 16.1	45.6	$\pm$ 18.2	38.3	$\pm$ 13.1					
SDMA		0.62	$\pm$ 0.33	0.69	$\pm$ 0.38	0.55	$\pm$ 0.25	0.69	$\pm$ 0.62	0.86	$\pm$ 0.84	0.52	$\pm$ 0.10					
Gly		172.0	$\pm$ 56.4	161.1	$\pm$ 62.2	183.7	$\pm$ 47.8	210.2	$\pm$ 87.4	190.1	$\pm$ 63.2	230.4	$\pm$ 103.7					
Gln		516.0	$\pm$ 102.2	502.8	$\pm$ 124.5	530.3	$\pm$ 70.6	554.3	$\pm$ 100.1	564.1	$\pm$ 100.0	544.4	$\pm$ 101.3					
Guanosine		0.35	$\pm$ 0.51	0.39	$\pm$ 0.57	0.32	$\pm$ 0.45	0.45	$\pm$ 0.58	0.40	$\pm$ 0.52	0.50	$\pm$ 0.63					
$\gamma$ -Glu-Ala		1.0	$\pm$ 0.36	0.92	$\pm$ 0.28	1.2	$\pm$ 0.40	1.2	$\pm$ 0.46	1.2	$\pm$ 0.33	1.1	$\pm$ 0.56					
$\gamma$ -Glu-Leu		0.40	$\pm$ 0.16	0.43	$\pm$ 0.17	0.36	$\pm$ 0.14	0.36	$\pm$ 0.16	0.40	$\pm$ 0.16	0.31	$\pm$ 0.15					
$\gamma$ -Glu-Gln+Norophthalmic acid		3.3	$\pm$ 1.2	2.9	$\pm$ 1.4	3.6	$\pm$ 1.0	4.1	$\pm$ 1.5	4.1	$\pm$ 1.4	4.0	$\pm$ 1.7					
$\gamma$ -Glu-Lys		1.1	$\pm$ 0.43	1.1	$\pm$ 0.42	1.1	$\pm$ 0.45	1.1	$\pm$ 0.46	1.1	$\pm$ 0.40	1.1	$\pm$ 0.51					
Hypotaurine		3.6	$\pm$ 3.7	3.3	$\pm$ 2.1	4.1	$\pm$ 4.9	5.3	$\pm$ 11.0	5.1	$\pm$ 8.0	5.6	$\pm$ 13.5					
His		71.7	$\pm$ 14.5	66.4	$\pm$ 14.2	77.4	$\pm$ 12.8	74.7	$\pm$ 16.9	74.2	$\pm$ 15.4	75.2	$\pm$ 18.6					
Hydroxyproline		13.3	$\pm$ 5.9	13.1	$\pm$ 6.0	13.6	$\pm$ 6.0	13.7	$\pm$ 6.6	14.1	$\pm$ 6.5	13.3	$\pm$ 6.7					
Inosine		3.4	$\pm$ 4.3	2.8	$\pm$ 3.6	4.0	$\pm$ 4.9	3.9	$\pm$ 4.1	3.4	$\pm$ 4.4	4.3	$\pm$ 3.8					
Leu		119.9	$\pm$ 35.8	126.5	$\pm$ 38.4	112.8	$\pm$ 32.1	110.3	$\pm$ 39.3	113.3	$\pm$ 41.3	107.3	$\pm$ 37.7					
Lys		173.7	$\pm$ 46.6	178.0	$\pm$ 43.6	169.1	$\pm$ 50.1	175.1	$\pm$ 40.3	179.1	$\pm$ 37.0	171.1	$\pm$ 43.6					
Met		16.3	$\pm$ 5.1	15.7	$\pm$ 4.6	17.1	$\pm$ 5.7	18.3	$\pm$ 7.4	19.4	$\pm$ 6.3	17.2	$\pm$ 8.4					
S-Methyl-L-cysteine		4.3	$\pm$ 2.0	3.6	$\pm$ 1.3	5.0	$\pm$ 2.3	4.9	$\pm$ 1.7	5.0	$\pm$ 1.8	4.8	$\pm$ 1.7					
Pro		192.3	$\pm$ 69.9	202.4	$\pm$ 85.1	181.4	$\pm$ 47.7	190.0	$\pm$ 79.1	198.3	$\pm$ 77.6	181.7	$\pm$ 81.2					
Phe		75.0	$\pm$ 29.0	78.1	$\pm$ 34.5	71.7	$\pm$ 21.7	66.8	$\pm$ 20.2	65.8	$\pm$ 16.1	67.8	$\pm$ 23.9					
Thr		115.5	$\pm$ 29.7	114.3	$\pm$ 28.3	116.8	$\pm$ 31.7	114.7	$\pm$ 32.4	116.5	$\pm$ 34.6	112.9	$\pm$ 30.7					
Taurine		124.3	$\pm$ 44.6	118.7	$\pm$ 39.0	130.3	$\pm$ 50.2	121.9	$\pm$ 54.5	126.6	$\pm$ 62.4	117.1	$\pm$ 46.1					
Trp		44.6	$\pm$ 10.4	43.7	$\pm$ 12.1	45.6	$\pm$ 8.5	42.4	$\pm$ 10.7	42.5	$\pm$ 11.5	42.3	$\pm$ 10.1					
Val		230.0	$\pm$ 54.4	236.7	$\pm$ 51.5	222.7	$\pm$ 57.6	204.3	$\pm$ 52.8	205.9	$\pm$ 46.0	202.6	$\pm$ 59.8					



単位 μM	卵巣がん			大腸がん						アトピー性皮膚炎					
	全体(=女)			全体		男		女		全体		男		女	
	年齢 例数	62.3 ± 50	10.7	67.0 ± 50	10.0	67.8 ± 24	8.0	66.3 ± 26	11.6	31.4 ± 50	13.1	28.7 ± 25	10.1	34.0 ± 25	15.2
cis-Aconitate	2.9 ±	0.79	3.0 ±	0.96	3.2 ±	0.77	2.9 ±	1.1	2.5 ±	1.3	2.4 ±	0.81	2.6 ±	1.6	
N-Acetylaspartate	10.6 ±	39.4	8.3 ±	29.3	16.3 ±	41.2	1.0 ±	0.61	11.8 ±	50.6	9.6 ±	30.8	13.9 ±	65.4	
Gluconate	5.1 ±	1.8	4.5 ±	1.9	4.6 ±	2.2	4.4 ±	1.7	4.6 ±	7.7	3.4 ±	1.4	5.7 ±	10.7	
Lactate	2182.9 ±	1103.4	2436.4 ±	1069.4	2226.5 ±	953.0	2630.2 ±	1150.9	2216.3 ±	721.3	2545.0 ±	686.6	1887.6 ±	604.8	
Malate	6.1 ±	2.1	7.4 ±	2.5	7.3 ±	2.4	7.6 ±	2.6	5.7 ±	2.5	6.3 ±	3.0	5.1 ±	1.8	
2-Oxoglutarate	8.1 ±	3.8	10.1 ±	4.1	9.3 ±	4.2	10.9 ±	4.0	7.8 ±	2.5	8.2 ±	2.8	7.4 ±	2.1	
Pyruvate	44.4 ±	33.9	60.9 ±	40.3	56.0 ±	32.8	65.4 ±	46.4	51.2 ±	28.2	52.0 ±	24.4	50.5 ±	32.1	
Citrate	45.7 ±	14.5	49.7 ±	18.0	48.4 ±	16.9	50.9 ±	19.2	40.1 ±	12.1	37.4 ±	11.4	42.9 ±	12.4	
Isocitrate	0.80 ±	0.38	0.92 ±	0.41	0.91 ±	0.39	0.93 ±	0.43	0.68 ±	0.75	0.58 ±	0.29	0.79 ±	1.0	
Ala	439.8 ±	94.5	437.4 ±	118.8	443.7 ±	106.5	431.6 ±	131.0	399.7 ±	106.3	405.7 ±	89.0	393.7 ±	122.8	
Asn	53.6 ±	11.1	51.8 ±	13.3	51.2 ±	11.5	52.4 ±	14.9	51.5 ±	11.7	52.1 ±	11.6	50.9 ±	12.0	
N-Acetyl-D-glucosamine+N-Acetyl-D-mannosamine	1.8 ±	1.3	2.6 ±	1.7	2.8 ±	2.1	2.4 ±	1.3	1.9 ±	1.2	2.3 ±	1.1	1.4 ±	1.2	
2-Aminobutyrate	14.0 ±	4.2	16.9 ±	5.7	15.2 ±	4.5	18.4 ±	6.4	15.9 ±	5.0	16.3 ±	4.8	15.5 ±	5.3	
Acetyl carnitine	6.8 ±	3.2	8.5 ±	2.8	8.0 ±	2.4	8.9 ±	3.1	5.7 ±	2.6	5.9 ±	2.6	5.6 ±	2.7	
Creatine	48.0 ±	23.2	43.7 ±	23.0	40.5 ±	26.7	46.7 ±	19.0	46.8 ±	21.0	39.2 ±	21.7	54.4 ±	17.4	
Citrulline	35.8 ±	9.9	32.2 ±	9.4	31.9 ±	9.6	32.3 ±	9.3	29.3 ±	14.5	28.3 ±	5.3	30.2 ±	20.0	
Cystine	48.0 ±	9.0	38.4 ±	13.8	33.3 ±	14.4	43.2 ±	11.5	32.6 ±	9.5	30.9 ±	9.7	34.4 ±	9.1	
SDMA	0.59 ±	0.18	0.56 ±	0.14	0.57 ±	0.15	0.54 ±	0.13	0.51 ±	0.39	0.48 ±	0.10	0.53 ±	0.55	
Gly	203.1 ±	79.4	183.8 ±	57.2	195.6 ±	61.5	173.0 ±	51.7	171.5 ±	50.7	172.1 ±	42.9	170.9 ±	58.4	
Gln	559.4 ±	75.7	547.2 ±	87.9	538.4 ±	84.8	555.3 ±	91.5	526.5 ±	85.4	537.9 ±	81.9	515.2 ±	88.9	
Guanosine	0.35 ±	0.44	0.36 ±	0.63	0.26 ±	0.61	0.44 ±	0.64	0.69 ±	0.78	0.51 ±	0.74	0.88 ±	0.79	
γ-Glu-Ala	1.1 ±	0.38	1.0 ±	0.39	1.00 ±	0.43	1.1 ±	0.35	1.2 ±	0.46	1.3 ±	0.42	1.1 ±	0.48	
γ-Glu-Leu	0.39 ±	0.14	0.36 ±	0.14	0.35 ±	0.12	0.37 ±	0.15	0.32 ±	0.14	0.36 ±	0.09	0.27 ±	0.16	
γ-Glu-Gln+Norphthalmic acid	3.9 ±	1.0	3.5 ±	1.5	3.3 ±	1.4	3.7 ±	1.5	4.2 ±	1.4	4.7 ±	1.5	3.7 ±	0.96	
γ-Glu-Lys	1.2 ±	0.42	1.0 ±	0.35	0.98 ±	0.32	1.1 ±	0.38	1.1 ±	0.47	1.2 ±	0.58	0.92 ±	0.28	
Hypotaurine	3.5 ±	8.0	3.5 ±	4.2	2.6 ±	1.2	4.4 ±	5.6	3.9 ±	4.0	3.6 ±	1.7	4.1 ±	5.5	
His	76.4 ±	13.5	77.0 ±	16.0	75.4 ±	16.6	78.5 ±	15.6	82.1 ±	13.5	82.2 ±	12.2	82.0 ±	14.9	
Hydroxyproline	13.5 ±	6.6	15.2 ±	12.1	12.8 ±	5.1	17.4 ±	15.9	13.7 ±	6.9	14.7 ±	8.5	12.7 ±	4.8	
Inosine	3.2 ±	3.1	3.1 ±	4.4	2.1 ±	3.8	4.0 ±	4.8	4.8 ±	5.1	3.7 ±	5.0	5.8 ±	5.0	
Leu	120.0 ±	35.4	117.4 ±	29.1	117.6 ±	25.9	117.2 ±	32.3	116.0 ±	27.6	121.1 ±	23.0	110.8 ±	31.3	
Lys	181.0 ±	42.9	172.1 ±	46.7	170.4 ±	48.4	173.6 ±	46.0	169.2 ±	40.3	167.5 ±	35.9	170.9 ±	44.9	
Met	18.2 ±	6.5	18.1 ±	6.1	18.3 ±	7.4	17.8 ±	4.7	17.6 ±	6.2	17.3 ±	5.2	17.9 ±	7.2	
S-Methyl-L-cysteine	5.1 ±	2.2	4.8 ±	2.0	4.7 ±	2.1	4.9 ±	1.9	3.9 ±	1.1	4.0 ±	1.2	3.8 ±	1.1	
Pro	192.2 ±	58.9	195.3 ±	83.6	205.2 ±	86.2	186.2 ±	81.7	186.9 ±	66.8	188.6 ±	50.2	185.2 ±	81.1	
Phe	68.5 ±	15.3	72.0 ±	12.7	75.2 ±	13.1	69.1 ±	11.8	60.6 ±	11.6	60.0 ±	10.0	61.2 ±	13.2	
Thr	126.3 ±	28.7	131.8 ±	37.4	126.4 ±	39.1	136.8 ±	35.9	141.3 ±	39.8	136.1 ±	35.6	146.6 ±	43.8	
Taurine	123.0 ±	76.8	113.6 ±	47.4	109.0 ±	44.8	117.9 ±	50.1	122.8 ±	41.6	139.3 ±	42.2	106.3 ±	34.5	
Trp	47.6 ±	11.5	48.1 ±	10.8	47.8 ±	11.5	48.4 ±	10.3	50.6 ±	9.5	51.5 ±	7.9	49.7 ±	11.0	
Val	225.7 ±	54.9	225.6 ±	47.1	228.4 ±	41.1	223.1 ±	52.7	225.5 ±	45.2	236.2 ±	42.1	214.7 ±	46.4	

単位 μM	卵巣がん				大腸がん				アトピー性皮膚炎							
	全体			全体			男		女		全体		男		女	
	年齢 例数	60.9 ± 11	12.0	70.2 ± 11	8.4	67.7 ± 6	3.1	73.2 ± 5	12.0	28.4 ± 10	10.9	25.4 ± 5	13.7	31.4 ± 5	7.5	
Fumarate	1.5 ± 11	0.89	2.1 ± 11	0.84	1.9 ± 6	0.42	2.2 ± 5	1.2	2.0 ± 10	1.3	1.9 ± 5	0.51	2.2 ± 5	1.9		
Glycerol 3-phosphate	1.1 ± 11	0.32	1.3 ± 11	0.72	1.7 ± 6	0.65	0.90 ± 5	0.59	1.0 ± 10	0.39	0.92 ± 5	0.46	1.1 ± 5	0.33		
2-Hydroxyglutaric Acid	2.9 ± 11	1.2	3.6 ± 11	2.0	4.5 ± 6	2.4	2.6 ± 5	0.66	3.0 ± 10	1.4	3.1 ± 5	1.4	2.9 ± 5	1.5		
Succinate	9.5 ± 11	1.4	9.8 ± 11	2.9	10.0 ± 6	3.1	9.6 ± 5	3.0	8.0 ± 10	2.6	8.6 ± 5	2.2	7.3 ± 5	3.1		
Asp	16.2 ± 11	9.1	25.1 ± 11	15.2	32.1 ± 6	17.6	16.6 ± 5	5.3	15.3 ± 10	9.8	20.0 ± 5	12.2	10.7 ± 5	3.7		
Arg	100.8 ± 11	17.4	101.1 ± 11	23.5	99.8 ± 6	15.9	102.7 ± 5	32.6	83.6 ± 10	16.8	83.8 ± 5	13.8	83.4 ± 5	21.0		
S-Adenosyl-L-methionine	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
S-Adenosyl-L-homocysteine	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Adenosine	0.01 ± 11	0.02	0.05 ± 11	0.15	0.08 ± 6	0.21	0 ± 5	0	0.04 ± 10	0.12	0 ± 5	0	0.08 ± 5	0.17		
β-Ala	3.8 ± 11	3.4	3.5 ± 11	2.6	2.7 ± 6	0.97	4.4 ± 5	3.7	3.1 ± 10	0.72	3.2 ± 5	0.75	2.9 ± 5	0.74		
Adenine	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Ala-Ala	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Cys	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Cystathionine	0.18 ± 11	0.19	0.12 ± 11	0.18	0.04 ± 6	0.10	0.21 ± 5	0.22	0.10 ± 10	0.20	0 ± 5	0	0.19 ± 5	0.26		
Cytidine	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Carnosine	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
L-Carnitine	48.9 ± 11	12.6	45.0 ± 11	10.7	47.9 ± 6	8.8	41.6 ± 5	12.8	48.6 ± 10	13.8	57.9 ± 5	7.6	39.3 ± 5	12.4		
Creatinine	51.1 ± 11	8.7	48.4 ± 11	10.7	47.9 ± 6	9.2	49.0 ± 5	13.4	41.9 ± 10	12.2	47.8 ± 5	13.5	35.9 ± 5	8.0		
Cytosine	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0.01 ± 10	0.04	0 ± 5	0	0.02 ± 5	0.05		
Cysteine-glutathione Disulfide	0.75 ± 11	0.67	0.76 ± 11	0.78	0.57 ± 6	0.88	1.0 ± 5	0.67	1.6 ± 10	0.92	1.2 ± 5	0.68	1.9 ± 5	1.0		
ADMA	0.47 ± 11	0.07	0.48 ± 11	0.08	0.49 ± 6	0.11	0.47 ± 5	0.05	0.46 ± 10	0.12	0.47 ± 5	0.16	0.46 ± 5	0.09		
Glu	52.8 ± 11	16.6	80.9 ± 11	51.2	107.3 ± 6	57.2	49.2 ± 5	13.2	41.1 ± 10	20.5	49.6 ± 5	25.3	32.7 ± 5	11.2		
Guanine	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
D-(+)-Glucosamine	0.05 ± 11	0.11	0.02 ± 11	0.07	0 ± 6	0	0.05 ± 5	0.10	0.03 ± 10	0.10	0 ± 5	0	0.06 ± 5	0.14		
γ-Glu-homoCys-Gly	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Gly-Gly	2.1 ± 11	2.7	2.4 ± 11	2.3	3.5 ± 6	2.4	1.2 ± 5	1.5	1.5 ± 10	1.5	2.3 ± 5	1.5	0.66 ± 5	0.88		
γ-Guanidinobutyrate	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Gly-Leu	0.02 ± 11	0.04	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Glu-Glu	0 ± 11	0	0.28 ± 11	0.58	0.51 ± 6	0.73	0 ± 5	0	0.04 ± 10	0.11	0.07 ± 5	0.16	0 ± 5	0		
γ-Glu-Abu	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Guanidinoacetate	2.2 ± 11	0.68	2.4 ± 11	0.66	2.4 ± 6	0.70	2.4 ± 5	0.68	2.2 ± 10	0.65	2.3 ± 5	0.88	2.1 ± 5	0.38		
γ-Glu-Ser	0.82 ± 11	0.21	0.75 ± 11	0.14	0.79 ± 6	0.14	0.71 ± 5	0.14	0.60 ± 10	0.30	0.65 ± 5	0.23	0.56 ± 5	0.39		
γ-Glu-Val	0.30 ± 11	0.21	0.11 ± 11	0.21	0.05 ± 6	0.12	0.19 ± 5	0.28	0.13 ± 10	0.14	0.18 ± 5	0.17	0.07 ± 5	0.10		
γ-Glu-Thr	0.63 ± 11	0.33	0.42 ± 11	0.41	0.47 ± 6	0.48	0.36 ± 5	0.34	0.44 ± 10	0.39	0.67 ± 5	0.36	0.21 ± 5	0.29		
γ-Glu-Met	0.09 ± 11	0.14	0.02 ± 11	0.06	0 ± 6	0	0.04 ± 5	0.09	0.05 ± 10	0.09	0.04 ± 5	0.08	0.07 ± 5	0.09		
γ-Glu-His	0.25 ± 11	0.35	0.13 ± 11	0.23	0.14 ± 6	0.22	0.12 ± 5	0.26	0.12 ± 10	0.28	0.25 ± 5	0.37	0 ± 5	0		
γ-Glu-Phe	0.21 ± 11	0.14	0.10 ± 11	0.12	0.08 ± 6	0.12	0.12 ± 5	0.12	0.07 ± 10	0.08	0.07 ± 5	0.10	0.07 ± 5	0.06		
γ-Glu-Arg	0.97 ± 11	0.19	0.66 ± 11	0.56	0.46 ± 6	0.50	0.90 ± 5	0.58	0.56 ± 10	0.52	0.65 ± 5	0.42	0.47 ± 5	0.64		
γ-Glu-Citrulline	0.23 ± 11	0.18	0.14 ± 11	0.20	0.05 ± 6	0.12	0.24 ± 5	0.23	0.13 ± 10	0.14	0.08 ± 5	0.12	0.17 ± 5	0.17		
γ-Glu-Tyr	0.29 ± 11	0.20	0.22 ± 11	0.16	0.12 ± 6	0.14	0.34 ± 5	0.09	0.08 ± 10	0.10	0.08 ± 5	0.11	0.07 ± 5	0.10		
Homocysteine	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Hypoxanthine	6.5 ± 11	3.5	8.7 ± 11	3.1	9.4 ± 6	3.4	7.8 ± 5	2.7	7.2 ± 10	3.1	7.0 ± 5	3.1	7.5 ± 5	3.4		
Homoserine	0.09 ± 11	0.16	0.14 ± 11	0.26	0.21 ± 6	0.33	0.07 ± 5	0.16	0.08 ± 10	0.13	0.05 ± 5	0.12	0.11 ± 5	0.15		
Homocystine	0 ± 11	0	0.03 ± 11	0.10	0.06 ± 6	0.14	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Ile	61.1 ± 11	20.0	47.0 ± 11	12.8	43.1 ± 6	7.9	51.6 ± 5	16.7	48.0 ± 10	10.8	44.6 ± 5	8.4	51.4 ± 5	12.7		
N-Methyl-Arg	0 ± 11	0	0.01 ± 11	0.04	0.02 ± 6	0.05	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Methionine Sulfoxide	2.6 ± 11	0.94	1.8 ± 11	0.47	1.6 ± 6	0.54	1.9 ± 5	0.32	2.0 ± 10	1.8	1.5 ± 5	1.9	2.5 ± 5	1.8		
Ornithine	61.1 ± 11	16.5	76.3 ± 11	18.7	74.6 ± 6	13.8	78.2 ± 5	25.1	55.8 ± 10	15.4	55.6 ± 5	15.1	56.1 ± 5	17.5		
Ophthalmic Acid	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Putrescine	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Ser	129.0 ± 11	38.2	128.2 ± 11	25.3	134.9 ± 6	31.7	120.1 ± 5	13.9	127.9 ± 10	32.8	126.9 ± 5	30.7	128.9 ± 5	38.5		
Spermidine	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Spermine	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Sarcosine	2.9 ± 11	1.2	1.7 ± 11	1.2	1.3 ± 6	1.2	2.3 ± 5	1.1	2.1 ± 10	0.50	2.1 ± 5	0.50	2.2 ± 5	0.55		
Tyr	74.5 ± 11	26.7	64.8 ± 11	13.1	62.1 ± 6	11.8	68.1 ± 5	15.1	59.9 ± 10	18.3	54.9 ± 5	16.4	65.0 ± 5	20.6		
Thiotaurine	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
Uric acid	250.4 ± 11	81.7	283.6 ± 11	71.7	298.4 ± 6	91.9	266.0 ± 5	40.0	256.8 ± 10	112.8	293.5 ± 5	110.4	220.1 ± 5	114.2		
Uracil	61.2 ± 11	109.0	91.5 ± 11	177.2	95.4 ± 6	200.2	86.9 ± 5	168.5	88.8 ± 10	157.6	13.7 ± 5	2.6	164.0 ± 5	204.4		
Uridine	13.7 ± 11	2.7	16.8 ± 11	8.3	19.9 ± 6	10.4	13.0 ± 5	1.8	12.9 ± 10	5.6	15.0 ± 5	7.5	10.9 ± 5	1.6		
Xanthine	1.8 ± 11	0.93	2.2 ± 11	1.0	2.4 ± 6	1.3	2.1 ± 5	0.71	1.9 ± 10	1.4	2.1 ± 5	1.4	1.6 ± 5	1.5		
cAMP	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		
cCMP	0 ± 11	0	0 ± 11	0	0 ± 6	0	0 ± 5	0	0 ± 10	0	0 ± 5	0	0 ± 5	0		

単位 $\mu\text{M}$	気管支喘息						肺気腫											
	全体			男		女	全体			男		女						
	年齢 例数	54.9 $\pm$ 50	21.0	56.6 $\pm$ 25	22.3	53.1 $\pm$ 25	19.9	74.2 $\pm$ 50	8.3	75.1 $\pm$ 25	7.6	73.2 $\pm$ 25	9.0					
cis-Aconitate	2.7	$\pm$	0.81	2.8	$\pm$	0.93	2.6	$\pm$	0.67	3.2	$\pm$	1.2	3.5	$\pm$	1.4	2.9	$\pm$	0.93
N-Acetylaspartate	8.1	$\pm$	29.1	0.91	$\pm$	0.24	15.2	$\pm$	40.2	9.9	$\pm$	36.0	18.7	$\pm$	49.9	1.1	$\pm$	0.40
Gluconate	4.3	$\pm$	1.9	4.2	$\pm$	1.5	4.4	$\pm$	2.2	5.0	$\pm$	1.7	5.1	$\pm$	2.1	4.8	$\pm$	1.3
Lactate	2574.8	$\pm$	1034.9	2670.0	$\pm$	1192.7	2479.6	$\pm$	863.4	2498.9	$\pm$	1047.5	2557.3	$\pm$	1211.1	2440.5	$\pm$	875.4
Malate	6.7	$\pm$	2.5	7.4	$\pm$	2.5	6.0	$\pm$	2.3	7.4	$\pm$	3.2	8.0	$\pm$	3.4	6.7	$\pm$	2.9
2-Oxoglutarate	9.8	$\pm$	6.3	10.6	$\pm$	8.3	8.9	$\pm$	3.5	9.3	$\pm$	3.2	9.3	$\pm$	3.5	9.2	$\pm$	3.0
Pyruvate	70.6	$\pm$	37.3	69.9	$\pm$	36.4	71.2	$\pm$	39.0	57.2	$\pm$	42.6	49.0	$\pm$	29.1	65.4	$\pm$	52.1
Citrate	42.7	$\pm$	13.6	44.8	$\pm$	12.0	40.7	$\pm$	15.0	48.0	$\pm$	16.7	48.8	$\pm$	18.0	47.2	$\pm$	15.6
Isocitrate	0.74	$\pm$	0.35	0.77	$\pm$	0.40	0.72	$\pm$	0.31	0.93	$\pm$	0.59	0.94	$\pm$	0.77	0.93	$\pm$	0.34
Ala	431.5	$\pm$	93.9	432.2	$\pm$	86.9	430.8	$\pm$	102.3	438.8	$\pm$	109.3	465.4	$\pm$	105.9	412.1	$\pm$	108.1
Asn	49.4	$\pm$	11.0	48.7	$\pm$	10.2	50.1	$\pm$	11.8	50.5	$\pm$	11.1	52.3	$\pm$	11.5	48.8	$\pm$	10.7
N-Acetyl-D-glucosamine+N-Acetyl-D-mannosamine	2.5	$\pm$	1.6	2.5	$\pm$	1.5	2.5	$\pm$	1.6	2.4	$\pm$	1.2	2.6	$\pm$	0.99	2.1	$\pm$	1.3
2-Aminobutyrate	14.4	$\pm$	4.5	15.2	$\pm$	5.2	13.5	$\pm$	3.6	13.2	$\pm$	3.8	14.3	$\pm$	4.1	12.2	$\pm$	3.2
Acetyl carnitine	6.8	$\pm$	3.3	6.5	$\pm$	3.6	7.0	$\pm$	2.9	7.4	$\pm$	3.2	7.8	$\pm$	3.5	6.9	$\pm$	2.9
Creatine	51.1	$\pm$	21.9	49.3	$\pm$	21.8	53.0	$\pm$	22.3	46.6	$\pm$	29.0	41.5	$\pm$	32.7	51.7	$\pm$	24.3
Citrulline	33.8	$\pm$	9.2	36.1	$\pm$	9.2	31.5	$\pm$	8.8	38.8	$\pm$	9.9	39.8	$\pm$	9.5	37.7	$\pm$	10.4
Cystine	34.0	$\pm$	15.4	31.7	$\pm$	15.5	36.3	$\pm$	15.2	40.4	$\pm$	15.0	44.8	$\pm$	13.4	36.0	$\pm$	15.5
SDMA	0.52	$\pm$	0.13	0.55	$\pm$	0.15	0.50	$\pm$	0.10	0.62	$\pm$	0.17	0.69	$\pm$	0.20	0.54	$\pm$	0.10
Gly	169.8	$\pm$	59.4	161.2	$\pm$	53.5	178.4	$\pm$	64.8	179.3	$\pm$	56.9	164.1	$\pm$	48.4	194.4	$\pm$	61.5
Gln	533.6	$\pm$	77.5	551.2	$\pm$	74.1	516.0	$\pm$	78.2	552.2	$\pm$	77.5	558.6	$\pm$	81.1	545.9	$\pm$	74.9
Guanosine	0.65	$\pm$	0.77	0.55	$\pm$	0.68	0.74	$\pm$	0.86	0.38	$\pm$	0.57	0.31	$\pm$	0.44	0.46	$\pm$	0.68
$\gamma$ -Glu-Ala	1.2	$\pm$	0.33	1.3	$\pm$	0.36	1.1	$\pm$	0.28	1.3	$\pm$	0.46	1.4	$\pm$	0.49	1.2	$\pm$	0.40
$\gamma$ -Glu-Leu	0.41	$\pm$	0.18	0.49	$\pm$	0.19	0.34	$\pm$	0.14	0.39	$\pm$	0.19	0.44	$\pm$	0.18	0.34	$\pm$	0.19
$\gamma$ -Glu-Gln+Norphthalmic acid	4.0	$\pm$	1.2	4.2	$\pm$	1.1	3.7	$\pm$	1.3	4.4	$\pm$	1.4	4.7	$\pm$	1.7	4.0	$\pm$	0.93
$\gamma$ -Glu-Lys	1.2	$\pm$	0.62	1.4	$\pm$	0.77	1.0	$\pm$	0.33	1.3	$\pm$	0.48	1.4	$\pm$	0.55	1.2	$\pm$	0.36
Hypotaurine	3.6	$\pm$	4.0	4.0	$\pm$	4.2	3.3	$\pm$	3.8	4.0	$\pm$	4.0	3.5	$\pm$	1.6	4.5	$\pm$	5.4
His	80.8	$\pm$	14.7	80.8	$\pm$	13.0	80.9	$\pm$	16.5	77.2	$\pm$	15.6	82.7	$\pm$	15.0	71.8	$\pm$	14.5
Hydroxyproline	17.5	$\pm$	33.6	21.8	$\pm$	47.0	13.3	$\pm$	8.2	12.9	$\pm$	9.8	11.8	$\pm$	4.4	14.0	$\pm$	13.2
Inosine	5.6	$\pm$	6.5	4.3	$\pm$	5.5	7.0	$\pm$	7.3	4.0	$\pm$	5.2	4.1	$\pm$	5.5	4.0	$\pm$	5.0
Leu	124.4	$\pm$	41.4	132.2	$\pm$	43.6	116.6	$\pm$	38.3	114.1	$\pm$	35.1	127.5	$\pm$	32.8	100.7	$\pm$	32.7
Lys	187.3	$\pm$	51.1	191.7	$\pm$	53.9	182.9	$\pm$	48.9	181.3	$\pm$	47.7	188.4	$\pm$	41.6	174.1	$\pm$	52.9
Met	18.4	$\pm$	6.8	19.8	$\pm$	5.8	17.1	$\pm$	7.5	17.2	$\pm$	5.4	17.6	$\pm$	4.8	16.8	$\pm$	5.9
S-Methyl-L-cysteine	3.9	$\pm$	1.3	3.9	$\pm$	1.4	3.9	$\pm$	1.1	4.3	$\pm$	1.6	4.5	$\pm$	1.9	4.0	$\pm$	1.3
Pro	197.7	$\pm$	71.1	205.8	$\pm$	77.2	189.6	$\pm$	64.9	193.6	$\pm$	69.7	205.0	$\pm$	70.5	182.1	$\pm$	68.3
Phe	65.2	$\pm$	13.6	66.8	$\pm$	16.0	63.6	$\pm$	10.8	69.0	$\pm$	15.8	73.5	$\pm$	16.7	64.5	$\pm$	13.7
Thr	125.9	$\pm$	29.5	125.6	$\pm$	21.7	126.1	$\pm$	36.1	121.7	$\pm$	30.5	127.5	$\pm$	28.4	115.9	$\pm$	32.0
Taurine	124.1	$\pm$	48.2	121.8	$\pm$	42.3	126.4	$\pm$	54.2	130.1	$\pm$	63.5	128.1	$\pm$	47.6	132.1	$\pm$	77.2
Trp	53.0	$\pm$	10.6	51.9	$\pm$	8.6	54.1	$\pm$	12.3	46.1	$\pm$	11.0	48.2	$\pm$	10.3	43.9	$\pm$	11.3
Val	240.7	$\pm$	62.9	253.7	$\pm$	68.0	227.8	$\pm$	55.7	222.1	$\pm$	50.9	238.8	$\pm$	47.2	205.4	$\pm$	49.8



単位 $\mu\text{M}$	間質性肺炎・肺線維症						緑内障					
	全体		男		女		全体		男		女	
	68.6	$\pm$ 8.8	66.9	$\pm$ 8.9	70.3	$\pm$ 8.6	67.7	$\pm$ 15.8	64.8	$\pm$ 14.9	70.8	$\pm$ 16.5
年齢 例数	50		25		25	50		26		24		
cis-Aconitate	2.7	$\pm$ 0.81	2.6	$\pm$ 0.87	2.7	$\pm$ 0.75	2.8	$\pm$ 0.84	2.6	$\pm$ 0.76	3.0	$\pm$ 0.87
N-Acetylaspartate	8.1	$\pm$ 28.0	10.3	$\pm$ 31.8	5.9	$\pm$ 24.1	7.6	$\pm$ 26.6	9.9	$\pm$ 31.9	5.1	$\pm$ 19.8
Gluconate	4.7	$\pm$ 1.4	4.6	$\pm$ 1.7	4.8	$\pm$ 1.2	5.3	$\pm$ 3.0	4.5	$\pm$ 2.2	6.1	$\pm$ 3.5
Lactate	2629.4	$\pm$ 1030.1	2846.5	$\pm$ 1083.3	2412.3	$\pm$ 945.9	2229.2	$\pm$ 1029.3	2360.0	$\pm$ 1123.0	2087.4	$\pm$ 919.7
Malate	7.0	$\pm$ 2.9	6.9	$\pm$ 2.7	7.1	$\pm$ 3.1	6.9	$\pm$ 3.3	6.7	$\pm$ 3.2	7.1	$\pm$ 3.4
2-Oxoglutarate	10.4	$\pm$ 4.9	11.0	$\pm$ 6.3	9.8	$\pm$ 2.9	8.9	$\pm$ 3.4	8.9	$\pm$ 3.3	8.9	$\pm$ 3.7
Pyruvate	68.2	$\pm$ 54.9	74.7	$\pm$ 71.1	61.7	$\pm$ 31.8	58.6	$\pm$ 42.5	65.2	$\pm$ 51.5	51.5	$\pm$ 29.5
Citrate	42.7	$\pm$ 11.8	41.4	$\pm$ 12.7	44.0	$\pm$ 11.0	47.0	$\pm$ 14.6	41.4	$\pm$ 13.1	53.0	$\pm$ 14.0
Isocitrate	0.78	$\pm$ 0.39	0.76	$\pm$ 0.39	0.79	$\pm$ 0.39	0.85	$\pm$ 0.44	0.80	$\pm$ 0.45	0.91	$\pm$ 0.42
Ala	448.8	$\pm$ 91.8	455.6	$\pm$ 95.9	442.0	$\pm$ 88.9	443.7	$\pm$ 97.2	459.0	$\pm$ 89.1	427.1	$\pm$ 104.6
Asn	50.4	$\pm$ 11.5	50.0	$\pm$ 9.7	50.9	$\pm$ 13.2	52.1	$\pm$ 10.1	50.5	$\pm$ 7.6	53.8	$\pm$ 12.2
N-Acetyl-D-glucosamine+N-Acetyl-D-mannosamine	2.2	$\pm$ 1.4	2.3	$\pm$ 1.5	2.2	$\pm$ 1.3	2.6	$\pm$ 1.4	2.9	$\pm$ 1.4	2.3	$\pm$ 1.4
2-Aminobutyrate	16.3	$\pm$ 5.6	17.5	$\pm$ 5.1	15.2	$\pm$ 5.8	17.1	$\pm$ 6.2	19.2	$\pm$ 6.9	14.8	$\pm$ 4.5
Acetyl carnitine	7.7	$\pm$ 4.1	7.9	$\pm$ 4.0	7.5	$\pm$ 4.3	7.6	$\pm$ 3.6	7.9	$\pm$ 4.2	7.2	$\pm$ 2.8
Creatine	52.1	$\pm$ 26.8	44.5	$\pm$ 27.1	59.6	$\pm$ 24.9	48.6	$\pm$ 22.9	42.2	$\pm$ 21.2	55.4	$\pm$ 23.0
Citrulline	35.2	$\pm$ 13.4	33.5	$\pm$ 13.0	36.8	$\pm$ 13.8	39.8	$\pm$ 11.2	39.6	$\pm$ 11.0	39.9	$\pm$ 11.7
Cystine	47.2	$\pm$ 12.0	49.5	$\pm$ 11.1	44.9	$\pm$ 12.6	43.5	$\pm$ 14.0	43.9	$\pm$ 14.0	43.1	$\pm$ 14.3
SDMA	0.56	$\pm$ 0.19	0.57	$\pm$ 0.25	0.55	$\pm$ 0.13	0.59	$\pm$ 0.31	0.61	$\pm$ 0.40	0.57	$\pm$ 0.16
Gly	152.3	$\pm$ 44.7	143.4	$\pm$ 35.0	161.1	$\pm$ 51.8	176.6	$\pm$ 56.1	172.4	$\pm$ 53.7	181.2	$\pm$ 59.5
Gln	534.0	$\pm$ 74.3	514.5	$\pm$ 78.9	553.6	$\pm$ 65.3	548.3	$\pm$ 69.5	531.5	$\pm$ 49.4	566.5	$\pm$ 83.6
Guanosine	0.43	$\pm$ 0.62	0.43	$\pm$ 0.73	0.43	$\pm$ 0.50	0.41	$\pm$ 0.53	0.38	$\pm$ 0.61	0.44	$\pm$ 0.45
$\gamma$ -Glu-Ala	1.2	$\pm$ 0.35	1.2	$\pm$ 0.37	1.2	$\pm$ 0.34	1.2	$\pm$ 0.31	1.2	$\pm$ 0.32	1.2	$\pm$ 0.30
$\gamma$ -Glu-Leu	0.38	$\pm$ 0.17	0.42	$\pm$ 0.15	0.34	$\pm$ 0.18	0.41	$\pm$ 0.15	0.44	$\pm$ 0.15	0.37	$\pm$ 0.13
$\gamma$ -Glu-Gln+Norphthalmic acid	3.9	$\pm$ 1.0	3.8	$\pm$ 1.1	4.0	$\pm$ 0.94	3.7	$\pm$ 1.1	3.6	$\pm$ 1.1	3.7	$\pm$ 1.1
$\gamma$ -Glu-Lys	1.2	$\pm$ 0.49	1.2	$\pm$ 0.36	1.2	$\pm$ 0.59	1.2	$\pm$ 0.40	1.3	$\pm$ 0.39	1.1	$\pm$ 0.40
Hypotaurine	3.6	$\pm$ 4.5	3.8	$\pm$ 5.6	3.5	$\pm$ 3.1	3.7	$\pm$ 4.8	2.9	$\pm$ 1.3	4.7	$\pm$ 6.7
His	75.0	$\pm$ 11.6	76.1	$\pm$ 11.1	73.9	$\pm$ 12.1	81.3	$\pm$ 11.8	83.6	$\pm$ 12.9	78.8	$\pm$ 10.2
Hydroxyproline	13.0	$\pm$ 8.5	15.1	$\pm$ 10.8	10.8	$\pm$ 4.6	12.3	$\pm$ 4.7	13.1	$\pm$ 5.2	11.4	$\pm$ 4.0
Inosine	2.9	$\pm$ 3.7	2.8	$\pm$ 4.4	3.1	$\pm$ 3.0	3.8	$\pm$ 4.1	3.6	$\pm$ 4.6	4.0	$\pm$ 3.7
Leu	118.9	$\pm$ 36.9	124.1	$\pm$ 34.7	113.7	$\pm$ 38.9	127.0	$\pm$ 34.3	136.2	$\pm$ 30.6	116.9	$\pm$ 35.9
Lys	194.9	$\pm$ 50.1	204.1	$\pm$ 42.6	185.7	$\pm$ 56.0	189.2	$\pm$ 48.2	199.7	$\pm$ 40.3	177.8	$\pm$ 54.1
Met	17.5	$\pm$ 6.8	18.1	$\pm$ 6.0	17.0	$\pm$ 7.7	17.6	$\pm$ 5.2	18.5	$\pm$ 5.3	16.6	$\pm$ 5.0
S-Methyl-L-cysteine	4.5	$\pm$ 2.3	4.5	$\pm$ 2.1	4.6	$\pm$ 2.5	4.5	$\pm$ 2.1	4.8	$\pm$ 2.4	4.2	$\pm$ 1.6
Pro	196.4	$\pm$ 87.2	205.4	$\pm$ 67.2	187.3	$\pm$ 104.2	181.6	$\pm$ 38.1	190.9	$\pm$ 35.4	171.6	$\pm$ 39.2
Phe	68.4	$\pm$ 16.3	69.1	$\pm$ 12.8	67.7	$\pm$ 19.5	71.1	$\pm$ 13.0	70.2	$\pm$ 13.9	72.1	$\pm$ 12.0
Thr	123.3	$\pm$ 33.0	126.7	$\pm$ 33.1	119.8	$\pm$ 33.2	124.8	$\pm$ 26.2	128.5	$\pm$ 24.9	120.8	$\pm$ 27.6
Taurine	141.0	$\pm$ 65.9	131.1	$\pm$ 48.4	150.9	$\pm$ 79.5	134.0	$\pm$ 94.9	122.7	$\pm$ 49.2	146.3	$\pm$ 127.5
Trp	47.9	$\pm$ 11.6	49.8	$\pm$ 10.5	46.1	$\pm$ 12.6	49.9	$\pm$ 9.9	51.6	$\pm$ 9.2	48.1	$\pm$ 10.5
Val	240.3	$\pm$ 60.6	250.3	$\pm$ 58.0	230.2	$\pm$ 62.7	244.5	$\pm$ 52.9	259.1	$\pm$ 50.3	228.6	$\pm$ 52.0





単位 $\mu\text{M}$	関節リュウマチ						
	全体		男		女		
	年齢 例数	61.7 $\pm$ 50	12.2	66.0 $\pm$ 14	10.5	60.0 $\pm$ 36	12.6
cis-Aconitate		2.4 $\pm$	0.79	2.1 $\pm$	0.69	2.5 $\pm$	0.81
N-Acetylaspartate		7.2 $\pm$	25.2	7.9 $\pm$	26.0	7.0 $\pm$	25.2
Gluconate		6.3 $\pm$	10.0	4.9 $\pm$	2.1	6.8 $\pm$	11.7
Lactate		2194.5 $\pm$	1035.6	2197.0 $\pm$	919.3	2193.5 $\pm$	1089.7
Malate		5.7 $\pm$	2.2	5.2 $\pm$	2.1	5.9 $\pm$	2.2
2-Oxoglutarate		8.6 $\pm$	3.6	8.5 $\pm$	2.6	8.6 $\pm$	4.0
Pyruvate		64.0 $\pm$	33.1	71.4 $\pm$	29.1	61.1 $\pm$	34.5
Citrate		39.5 $\pm$	11.8	33.8 $\pm$	9.8	41.8 $\pm$	11.8
Isocitrate		0.74 $\pm$	0.43	0.62 $\pm$	0.27	0.78 $\pm$	0.47
Ala		431.2 $\pm$	93.4	428.0 $\pm$	96.8	432.5 $\pm$	93.4
Asn		49.6 $\pm$	11.1	48.4 $\pm$	9.5	50.0 $\pm$	11.8
N-Acetyl-D-glucosamine+N-Acetyl-D-mannosamine		2.0 $\pm$	1.5	1.6 $\pm$	0.87	2.1 $\pm$	1.7
2-Aminobutyrate		14.6 $\pm$	4.6	12.8 $\pm$	4.3	15.3 $\pm$	4.5
Acetyl carnitine		6.9 $\pm$	3.2	6.9 $\pm$	2.6	7.0 $\pm$	3.4
Creatine		56.0 $\pm$	29.6	43.5 $\pm$	29.7	60.9 $\pm$	28.5
Citrulline		37.7 $\pm$	21.8	34.6 $\pm$	16.7	38.8 $\pm$	23.6
Cystine		47.4 $\pm$	14.2	46.0 $\pm$	12.7	48.0 $\pm$	14.9
SDMA		0.62 $\pm$	0.64	0.54 $\pm$	0.14	0.65 $\pm$	0.75
Gly		155.8 $\pm$	44.0	136.1 $\pm$	33.0	163.5 $\pm$	45.7
Gln		530.8 $\pm$	80.6	522.1 $\pm$	110.6	534.2 $\pm$	67.2
Guanosine		1.00 $\pm$	1.1	1.0 $\pm$	0.93	0.99 $\pm$	1.1
$\gamma$ -Glu-Ala		1.1 $\pm$	0.37	1.0 $\pm$	0.45	1.1 $\pm$	0.34
$\gamma$ -Glu-Leu		0.37 $\pm$	0.17	0.40 $\pm$	0.19	0.36 $\pm$	0.16
$\gamma$ -Glu-Gln+Norphthalmic acid		3.6 $\pm$	1.3	3.5 $\pm$	1.9	3.6 $\pm$	0.96
$\gamma$ -Glu-Lys		1.2 $\pm$	0.52	1.0 $\pm$	0.48	1.2 $\pm$	0.53
Hypotaurine		4.4 $\pm$	8.1	3.1 $\pm$	2.1	4.8 $\pm$	9.4
His		71.6 $\pm$	14.6	72.6 $\pm$	17.1	71.2 $\pm$	13.8
Hydroxyproline		12.8 $\pm$	7.5	14.7 $\pm$	10.1	12.1 $\pm$	6.2
Inosine		7.1 $\pm$	7.7	7.3 $\pm$	6.4	7.0 $\pm$	8.3
Leu		115.7 $\pm$	34.9	129.1 $\pm$	46.3	110.5 $\pm$	28.5
Lys		180.0 $\pm$	39.7	184.9 $\pm$	51.0	178.2 $\pm$	34.9
Met		17.2 $\pm$	6.2	18.8 $\pm$	6.4	16.6 $\pm$	6.1
S-Methyl-L-cysteine		4.0 $\pm$	1.3	3.9 $\pm$	1.5	4.0 $\pm$	1.3
Pro		199.0 $\pm$	85.1	227.9 $\pm$	121.6	187.8 $\pm$	64.6
Phe		74.2 $\pm$	21.8	79.2 $\pm$	23.5	72.2 $\pm$	21.2
Thr		129.4 $\pm$	36.9	128.4 $\pm$	29.0	129.8 $\pm$	40.0
Taurine		115.1 $\pm$	45.8	109.9 $\pm$	49.9	117.2 $\pm$	44.7
Trp		46.7 $\pm$	10.1	47.5 $\pm$	10.0	46.4 $\pm$	10.2
Val		229.9 $\pm$	52.2	254.1 $\pm$	67.1	220.5 $\pm$	42.6

単位 μM	関節リュウマチ					
	全体		男		女	
	年齢	±	±	±	±	±
例数	63.8	11.6	69.4	5.3	58.2	14.0
	10		5		5	
Fumarate	1.3 ±	0.71	0.88 ±	0.60	1.8 ±	0.51
Glycerol 3-phosphate	1.0 ±	0.30	1.0 ±	0.20	1.1 ±	0.40
2-Hydroxyglutaric Acid	3.2 ±	1.2	3.6 ±	1.5	2.9 ±	0.85
Succinate	7.4 ±	1.1	7.6 ±	1.5	7.2 ±	0.54
Asp	20.2 ±	8.1	20.1 ±	9.6	20.3 ±	7.5
Arg	105.3 ±	28.4	117.3 ±	37.7	93.2 ±	5.6
S-Adenosyl-L-methionine	0 ±	0	0 ±	0	0 ±	0
S-Adenosyl-L-homocysteine	0 ±	0	0 ±	0	0 ±	0
Adenosine	0 ±	0	0 ±	0	0 ±	0
β-Ala	2.9 ±	1.0	3.4 ±	1.3	2.4 ±	0.47
Adenine	0 ±	0	0 ±	0	0 ±	0
Ala-Ala	0 ±	0	0 ±	0	0 ±	0
Cys	0 ±	0	0 ±	0	0 ±	0
Cystathionine	0.09 ±	0.25	0.16 ±	0.35	0.03 ±	0.07
Cytidine	0 ±	0	0 ±	0	0 ±	0
Carnosine	0 ±	0	0 ±	0	0 ±	0
L-Carnitine	50.2 ±	15.8	57.1 ±	15.4	43.3 ±	14.4
Creatinine	48.5 ±	18.1	58.9 ±	21.1	38.1 ±	4.7
Cytosine	0 ±	0	0 ±	0	0 ±	0
Cysteine-glutathione Disulfide	0.94 ±	1.1	1.3 ±	1.4	0.62 ±	0.64
ADMA	0.42 ±	0.07	0.44 ±	0.08	0.40 ±	0.07
Glu	57.7 ±	18.7	66.0 ±	20.5	49.3 ±	14.0
Guanine	0 ±	0	0 ±	0	0 ±	0
D-(+)-Glucosamine	0.04 ±	0.12	0.08 ±	0.18	0 ±	0
γ-Glu-homoCys-Gly	0 ±	0	0 ±	0	0 ±	0
Gly-Gly	1.7 ±	1.4	1.8 ±	2.0	1.6 ±	0.58
γ-Guanidinobutyrate	0 ±	0	0 ±	0	0 ±	0
Gly-Leu	0.01 ±	0.02	0.01 ±	0.02	0 ±	0
Glu-Glu	0 ±	0	0 ±	0	0 ±	0
γ-Glu-Abu	0 ±	0	0 ±	0	0 ±	0
Guanidinoacetate	2.2 ±	0.72	2.5 ±	0.91	1.9 ±	0.35
γ-Glu-Ser	0.49 ±	0.39	0.42 ±	0.45	0.56 ±	0.34
γ-Glu-Val	0.14 ±	0.25	0.23 ±	0.33	0.04 ±	0.09
γ-Glu-Thr	0.19 ±	0.22	0.19 ±	0.26	0.19 ±	0.19
γ-Glu-Met	0.02 ±	0.05	0 ±	0	0.03 ±	0.07
γ-Glu-His	0.05 ±	0.14	0.09 ±	0.20	0 ±	0
γ-Glu-Phe	0.10 ±	0.11	0.07 ±	0.11	0.12 ±	0.12
γ-Glu-Arg	0.60 ±	0.66	0.70 ±	0.85	0.49 ±	0.49
γ-Glu-Citrulline	0.17 ±	0.25	0.19 ±	0.34	0.16 ±	0.15
γ-Glu-Tyr	0.17 ±	0.15	0.19 ±	0.20	0.15 ±	0.09
Homocysteine	0 ±	0	0 ±	0	0 ±	0
Hypoxanthine	8.0 ±	3.6	8.3 ±	4.7	7.8 ±	2.7
Homoserine	0.06 ±	0.13	0 ±	0	0.12 ±	0.17
Homocystine	0 ±	0	0 ±	0	0 ±	0
Ile	53.2 ±	26.4	60.3 ±	34.5	46.1 ±	15.8
N-Methyl-Arg	0 ±	0	0 ±	0	0 ±	0
Methionine Sulfoxide	1.9 ±	0.72	1.8 ±	0.88	1.9 ±	0.62
Ornithine	63.1 ±	28.3	66.9 ±	40.3	59.4 ±	11.9
Ophthalmic Acid	0 ±	0	0 ±	0	0 ±	0
Putrescine	0 ±	0	0 ±	0	0 ±	0
Ser	114.9 ±	27.8	119.2 ±	30.4	110.5 ±	27.8
Spermidine	0 ±	0	0 ±	0	0 ±	0
Spermine	0 ±	0	0 ±	0	0 ±	0
Sarcosine	2.3 ±	1.5	2.4 ±	1.2	2.3 ±	1.8
Tyr	63.4 ±	11.0	67.2 ±	11.7	59.5 ±	9.8
Thiotaurine	0 ±	0	0 ±	0	0 ±	0
Uric acid	255.2 ±	98.1	263.2 ±	62.3	247.2 ±	132.7
Uracil	88.1 ±	160.0	87.7 ±	172.4	88.4 ±	167.1
Uridine	13.5 ±	4.1	13.1 ±	3.5	13.9 ±	4.9
Xanthine	2.1 ±	1.1	1.9 ±	1.6	2.3 ±	0.51
cAMP	0 ±	0	0 ±	0	0 ±	0
cCMP	0 ±	0	0 ±	0	0 ±	0